

**CLAIMS**

- 1. An encoder-switch assembly comprising,**
  - 5     a first member, said first member being supported by a frame and being rotatably mounted in relation to the frame, the frame having a first part and a second part, the first part being adapted to support the first member and being displaceable relative to the second part so as to render the first member displaceable in relation to the second part from an initial position to a displaced position,
    - 10     a coding member engaging the first member in a manner so as to rotate when the first member rotates,
      - 15     means for returning the first member from the displaced position to the initial position,
      - 20     means for detecting rotation of the coding member in relation to the frame, and switching means for indicating when the first member is in the displaced position,
  - characterised in that:
    - the returning means is made from a plate-shaped resilient material and is constituted by the frame.
- 2. An encoder-switch assembly according to claim 1, wherein the frame is made from a plate-shaped resilient material.**
- 30 3. An encoder-switch assembly according to claim 2, wherein the first part and the second part of the fram are separated by one or more indentations.**

4. An encoder-switch assembly according to claim 2 or 3, wherein the second part of the frame further comprises engaging means, said engaging means being substantially rigidly attached to corresponding engaging means of an external housing or casing or frame.

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5. An encoder-switch assembly according to any of the preceding claims, wherein the switching means is adapted to indicate an electrical connection between a protrusion of the first part of the frame and an electrical conductor or pad positioned in a fixed manner relative to the second part of the frame and/or relative to 10 the external housing or casing or frame.

6. An encoder-switch assembly according to any of the preceding claims, wherein part of the coding member is integrated with the first member.

15 7. An encoder-switch assembly according to any of the preceding claims, wherein the first member comprises a substantially cylindrically shaped member having part of the coding member formed on an end surface part.

8. An encoder-switch assembly according to claim 7, wherein part of the coding 20 member is provided by arranging between 5 and 25 protrusions along a substantially axially oriented surface path on the end surface part of the substantially cylindrically shaped member.

9. An encoder-switch assembly according to claim 8, wherein the coding member 25 is formed by mounting a metal disc on the end surface part of the substantially cylindrically shaped member, the metal disc comprising between 5 and 25 holes of dimensions essentially equal to the dimensions of the protrusions of the coding member.

30 10. An encoder-switch assembly according to claim 9, further comprising at least three contact members being adapted to scan the end surface part of the substantially cylindrically shaped member, each contact member having a corresponding leg part.

11. An encoder-switch assembly according to claim 10, wherein the at least three contact members and the corresponding leg parts are constituted by the frame.

12. An encoder-switch assembly according to any of claims 1 - 5, wherein the coding member comprises a disc-shaped member comprising a number of intermittently positioned holes along an axially oriented path of the disc-shaped member, and wherein the detecting means comprises a light emitter positioned in a manner so as to transmit light through the holes of the disc-shaped member to a detector positioned in a manner so as to receive light pulses when the disc-shaped member is rotated.

13. An encoder-switch assembly comprising,

a frame,

15 a first member supported by the frame and being rotatably and displaceably mounted in relation to the frame, wherein the first member is rotatable in relation to the frame in a first plane, and wherein the first member is displaceable in relation to the frame between an initial position and a displaced position,

20 a resilient element for returning the first member from the displaced position to the initial position,

25 switching means for indicating when the first member is in the displaced position,

30 a coding member engaging the first member in a manner so as to rotate when the first member rotates, the coding member being fixedly connected to the frame, and the first member being rotatably mounted in relation to the coding member,

means for transferring a rotation of the first member to the coding member, and

m ans for detecting rotation of the coding m mber in relation to the frame.

14. An encoder-switch ass mbly according to claim 13, wherein th transferring  
m ans comprises a substantially rigid shaft, a first end of said substantially rigid  
5 shaft being connected to the first member in a manner so that the shaft is rotatable  
in relation the first member in a plane not being parallel to the first plane, a second  
and of said substantially rigid shaft being connected to the coding member in a  
manner so that the shaft is rotatable in relation the first member in a plane not be-  
ing parallel to the first plane.

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15. An encoder-switch assembly according to claim 14, wherein part of the shaft at  
the first end has a predetermined geometrical shape and wherein part of the first  
member has a corresponding inverse geometrical shape being adapted to receive  
and engage part of the shaft in a manner so that a rotation of the first member is  
15 transferred from the first member to the shaft, when the first member is rotated in  
the first plane.

16. An encoder-switch assembly according to claim 15, where the corresponding  
inverse geometrical shape of the first member has dimensions larger than the cor-  
20 responding outer dimensions of the predetermined geometrical shape of the shaft.

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